

City of Long Beach

Tree Replanting Master Plan



LiRo Engineers, Inc.
A LiRo Group Company

Rebuilding Stronger Smarter Safer

City of Long Beach



Effects of Sandy ———> Moving Forward

- Super Storm Sandy inundated Long Beach with salt water, severely damaging the City's tree population.
- After the storm, arborists from The LiRo Group conducted an extensive post storm inspection of the City's trees. This FEMA funded effort resulted in the need to remove approximately 48% of the City's tree stock.
- The LiRo Group was awarded the RFP to develop a comprehensive tree replanting program for Long Beach which would add resiliency and diversity to our landscape. The City also required that best practices from other agencies and municipalities be looked at as well to give the City the best possible program as they move forward.



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Using “What Works”

By adopting best practices and successes of other municipalities, we are able to bring, essentially, the best of all worlds in our approach for Long Beach. In addition to local practices, we used the following resources in developing this plan:

- Cornell Cooperative Extension of Suffolk County
- US Forest Service
- NYC DPR Street Tree Program
- Virginia Tech
- Dirr, Michael: “Manual of Woody Landscape Plants”
- NYSDOT Tree List
- LIPA “wire friendly” Tree List



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Tree Selection

- 32 large shade tree species
- 11 small and ornamental tree species
- 8 trees specifically picked out for canal and president streets due to the limited clearance
- Species are allocated by 1 to 2 block sections to help minimize the spread of disease and pests
- Power line friendly trees were specifically chosen for their size and shape to minimize interference
- Japanese Black Pine trees were chosen for the medians of the north-south Blvds. in the first 2 blocks north of Penn Street due to their ability to withstand seashore conditions



Planting Guidelines

- Planting setback guidelines based on existing codes:
 - Undersized tree pits will be increased where possible to improve growth conditions
 - New tree pits will be created to create uniformed appearance
 - 40 foot setback from intersections will:
 - Provide windbreak for trees planted on corner
 - Improve visibility
 - 25 foot setback from streetlight to tree trunk will:
 - Provide more effective illumination



Recommended Trees (Partial List)

Common Name	Selected Cultivars
Hedge Maple	Evelyn Metro Gold
Red Maple	October Glory Red Sunset
European Hornbeam	Fastigiata
Ginkgo	Princeton Sentry
Japanese Pagoda	Regent Princeton Upright
American Elm	Princeton Valley Forge Patriot
Zelkova	Green Vase Village Green Mushashino Wireless



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Hedge Maple Tree “Evelyn”

Fall Color



Spring/Summer Color



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Hedge Maple Tree “Evelyn” Tree Quick Facts

- Mature Height = 35 Feet
- Mature Width = 30 Feet
- Upright branching habit, oval shaped
- Spring/Summer Foliage = Dark Green
- Fall Foliage = Yellow
- Rapidly growing medium sized tree
- Dry soil tolerant
- Recommended by LIRO Group
- Included on NYC Parks Dept. Flood Zone list of acceptable trees
- Narrow upright habit makes it an ideal street tree



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“October Glory” Red Maple

Fall Color



Spring/Summer Color



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“October Glory” Red Maple Quick Facts

- Height = 40-50 feet
- Width = 25-35 feet
- Spring/Summer Color = Dark Green
- Fall Color = Radiant Red
- Rapid growing tree, adds several feet a year in growth
- Great shade providing tree
- Little maintenance required
- Recommended by The LIRO Group
- Included on NYC Parks Dept. Flood Zone list of acceptable trees
- Considered the reddest of all red fall colors



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“Princeton Sentry” Ginkgo

Spring/Summer

Fall



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“Princeton Sentry” Ginkgo Quick Facts

- Height = 40-50 Feet
- Width = 20-30 Feet
- Spring/Summer Color = Green
- Fall Color = Golden Yellow
- Slow growing tree
- Long lasting tree, will live to over 150 years old
- Known to be tolerant of saline conditions, heat and air pollution
- Rapid leaf drop in the autumn creates a “golden carpet” on the ground
- Recommended by The LIRO Group
- Included on NYC Parks Dept. Flood Zone list of acceptable trees



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Columnar European Hornbeam

Fall Color



Spring/Summer Color



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Columnar European Hornbeam Quick Facts

- Height = 35 feet
- Width = 25 feet
- Spring/Summer Color = Dark Green
- Fall Color = Yellow
- Moderate to rapid growing tree
- Narrow, column shape makes it a great choice for a street tree
- Known for being a very tough and adaptable tree
- Known to be heat and drought tolerant once established
- Recommended by The LIRO Group
- Included on NYC Parks Dept. Flood Zone list of acceptable trees



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Japanese Lilac Tree “Ivory Silk” Quick Facts

- Height = 20-25 Feet
- Width = 15-20 Feet
- Has blooms of creamy white flowers that bloom between May and June
- Flowers are very fragrant
- Attracts butterflies
- Tree color is green spring through summer
- Small compact tree, makes this tree a great fit for under utility lines
- Recommended by The LIRO Group
- Included on NYC Parks Dept. Flood Zone list of acceptable trees



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Columnar Sargent Cherry Tree “Quick Facts”

- Height = 20-30 Feet
- Width = 15-20 Feet
- Narrow upright growth habit, makes it conducive to being used as a curb-tree
- Fast/Rapid growth rate
- Spring/Summer Color = Green
- Fall Color = yellow/orange/red
- Flowers appear in the spring and are a light pink color
- Excellent for use under power-lines as it is a relatively small tree
- Recommended by The LIRO Group
- Included on NYC Parks Dept. Flood Zone list of acceptable trees



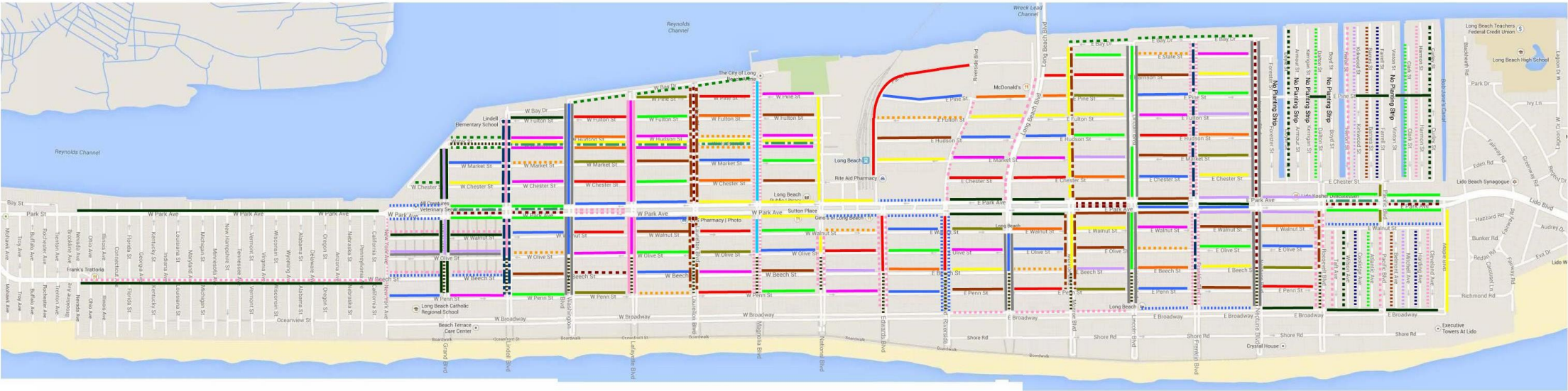
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Tree Replanting Master Plan



- Shade Trees**
- Red Maple
 - European Hornbeam
 - Ginkgo
 - Honeylocust
 - Sophora
 - Elm
 - Linden
 - Zelkova
 - Wireless Zelkova
 - Scarlet Oak
 - Swamp White Oak
 - Columnar English Oak
 - Willow Oak
 - Bald Cypress (median only)
 - Jap. Black Pine (median only)

- Small/Ornamental Trees**
- Amur Maple
 - Hedge Maple
 - Japanese Tree Lilac
 - Golden Rain Tree
 - Canada Red Chokecherry
 - Columnar Sargent Cherry
 - Amanogawa Cherry
 - Kwanzan Cherry
 - Thornless Hawthorn

- Trees for "Canal" and "President" Streets**
- "Frans Fontaine" European Hornbeam
 - "Mushashino" Zelkova
 - "Kindred Spirit" Oak
 - "Princeton Sentry" Ginkgo
 - Fastigiate Golden Rain Tree
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 - Columnar Sargent Cherry
 - Amanogawa Cherry



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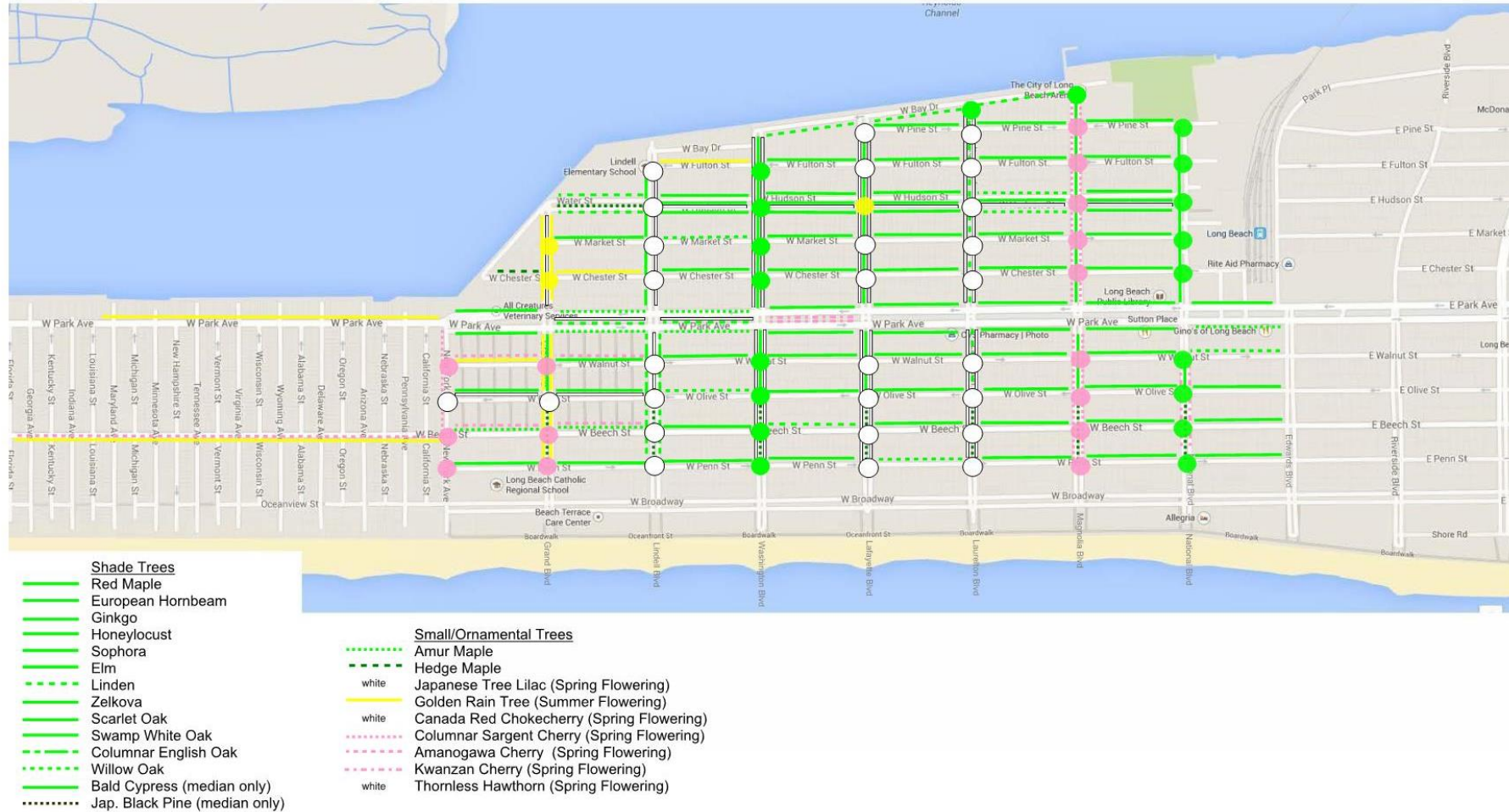
- ***** 'Frans Fontaine' European Hornbeam
- ***** 'Mushashino' Zelkova
- ***** 'Kindred Spirit' Oak
- ***** 'Princeton Sentry' Ginkgo
- ***** 'Golden Candle' Golden Rain Tree (Summer Flowers)
- ***** Columnar Sargent Cherry
- ***** Amanogawa Cherry



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City of Long Beach Street Tree Master Plan, Spring Foliage/Flower Color



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City of Long Beach Street Tree Master Plan, Fall Color



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 - Columnar Sargent Cherry
 - Amanogawa Cherry

Note: This graphic is not intended to accurately depict the fall foliage colors of the species called for by the plan. Some trees will exhibit a range of colors through the period of fall color change. For more accurate representation of fall coloring, an online image search or the consultation of tree guides with color photos is advised.



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Shade Trees

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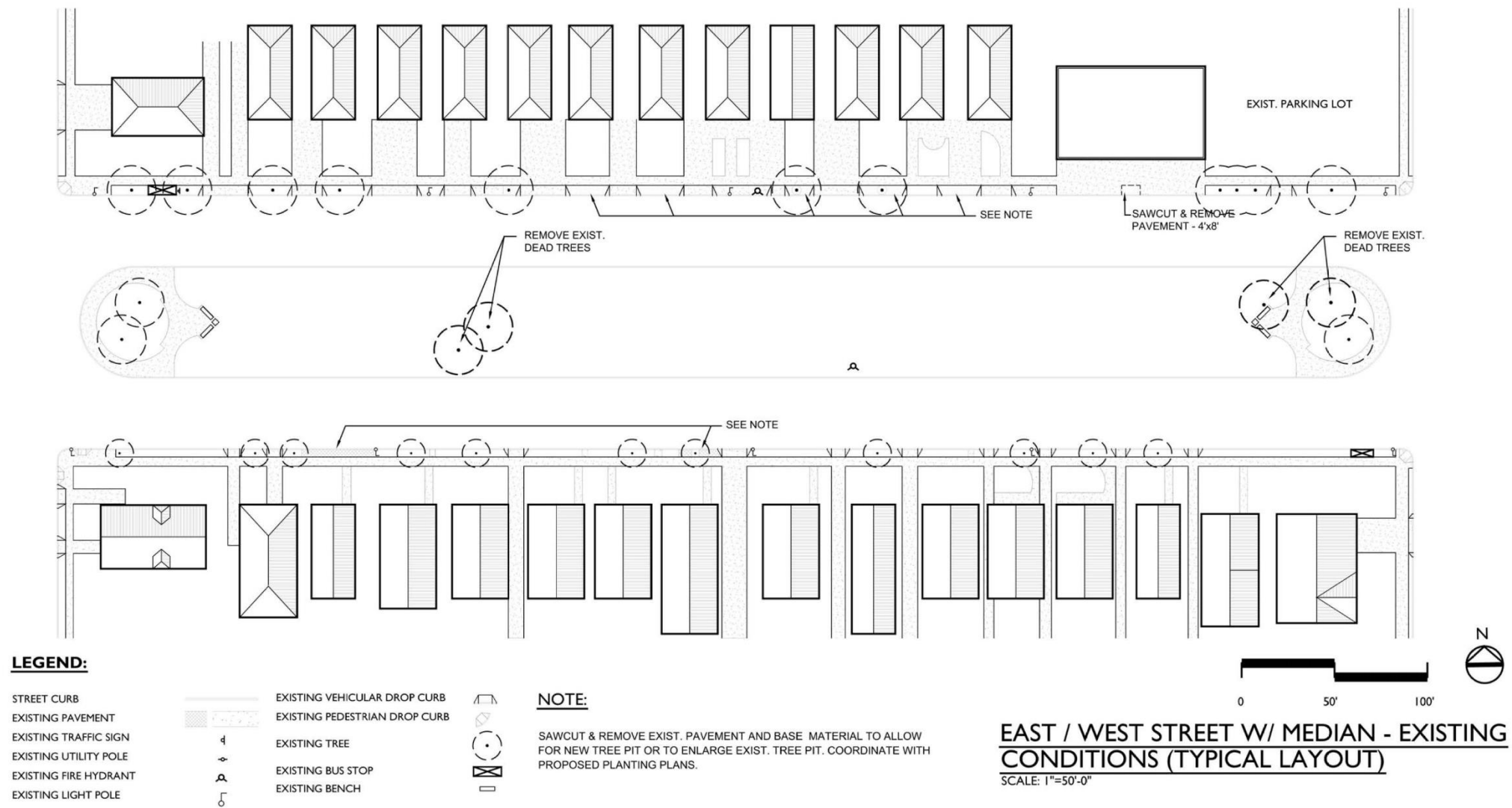
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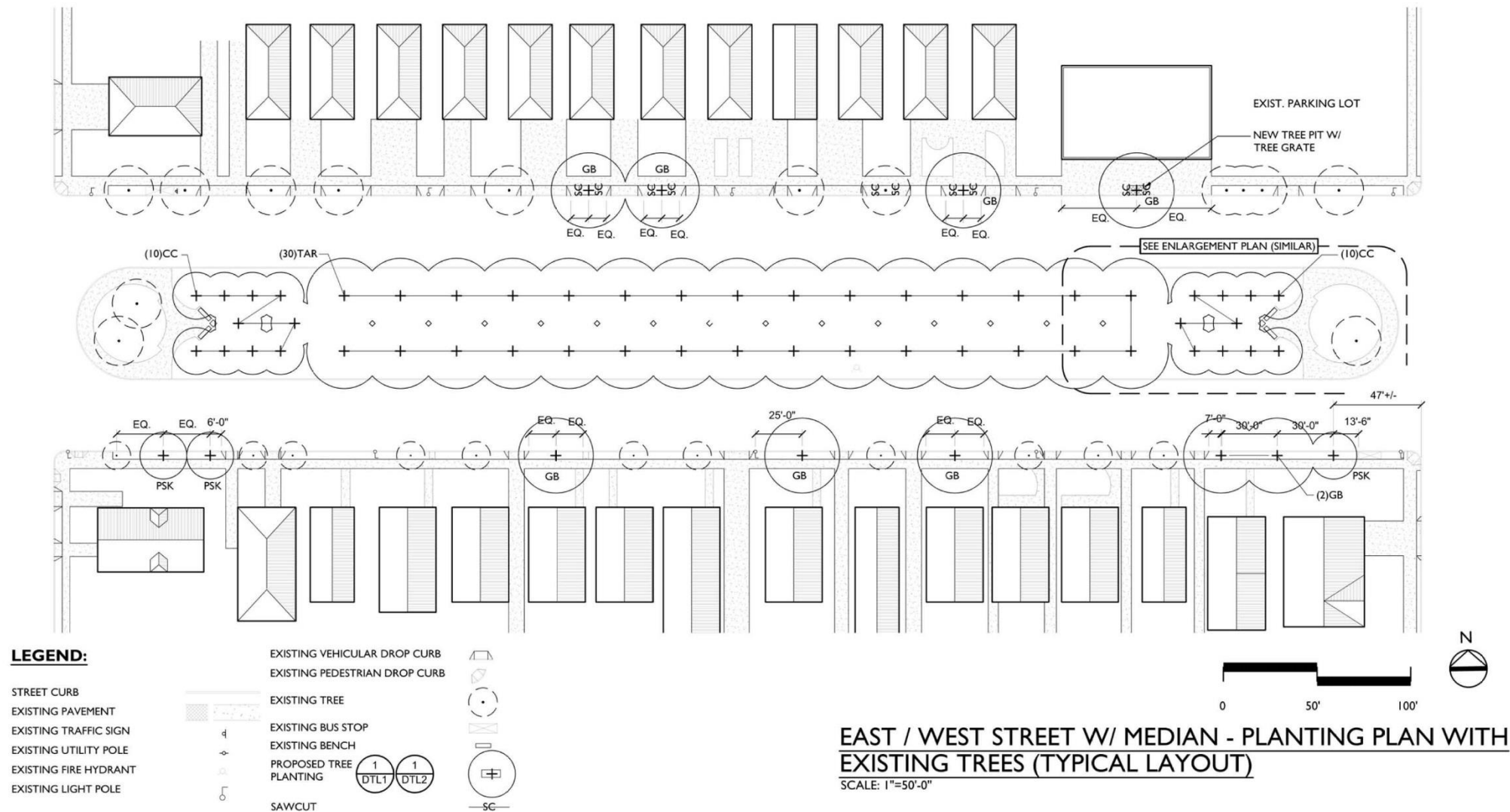
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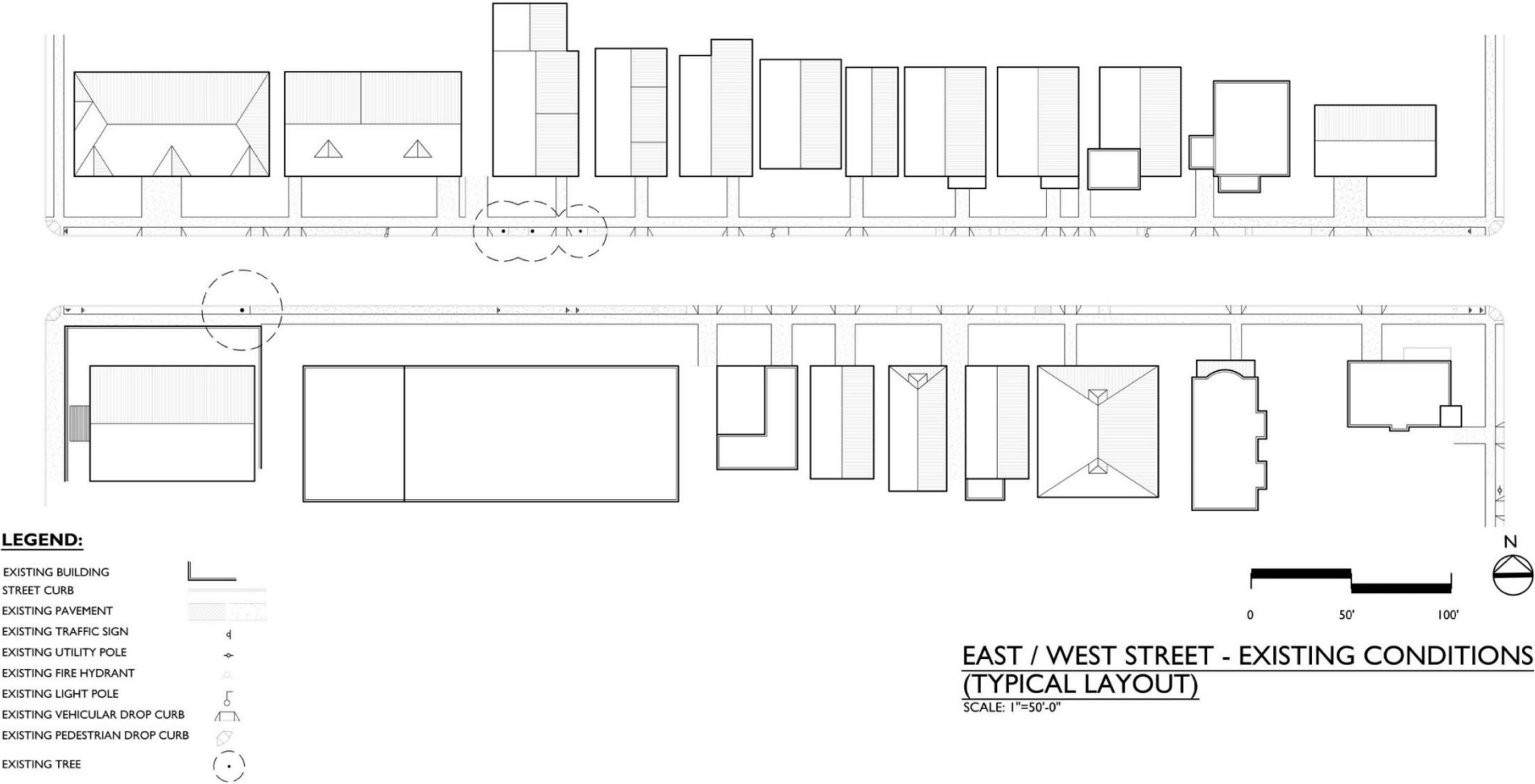
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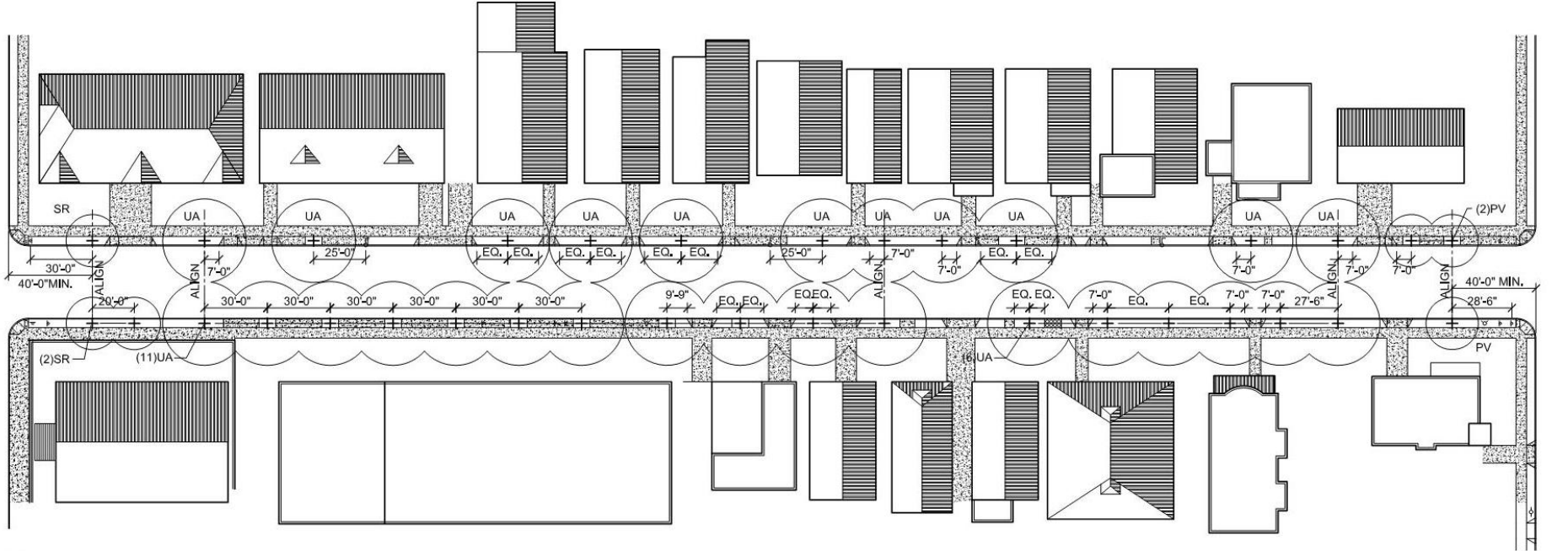
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LEGEND:

- EXISTING BUILDING
- STREET CURB
- EXISTING PAVEMENT
- EXISTING TRAFFIC SIGN
- EXISTING UTILITY POLE
- EXISTING FIRE HYDRANT
- EXISTING LIGHT POLE
- EXISTING VEHICULAR DROP CURB
- EXISTING PEDESTRIAN DROP CURB
- PROPOSED TREE IN NEW TREE PIT (TYP). SEE NOTE 1 & 1 DTL1

NOTES:

1. SAWCUT & REMOVE EXIST. CONCRETE PAVEMENT TO ALLOW FOR NEW TREE PIT - 4'x8'. SEE SPECS & 1 DTL1
2. CENTER NEW TREE PIT ON NEW OR EXIST. TREES.

EAST / WEST STREET - PLANTING PLAN NEW TREES (UNIVERSAL)
(TYPICAL LAYOUT)
SCALE: 1"=50'-0"



Timeline

- February 19, 2015: Notice and Advertisement to Bidders
- March 5, 2015: All Bids Due
- March 17, 2015: Project Awarded
- April/May 2015: Tree Planting Begins
(Approximately 6 weeks at 100 trees per week per zone)
- Completion by mid/end of June 2015



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- Questions?



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